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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,173	03/26/2004	Yee Loong Chin	70030949-1	7995
57299	7590	02/06/2006		
AVAGO TECHNOLOGIES, INC. P.O. BOX 1920 DENVER, CO 80201-1920			EXAMINER LIVEDALEN, BRIAN J	
			ART UNIT 2878	PAPER NUMBER

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/810,173	CHIN ET AL.	
	Examiner	Art Unit	
	Brian J. Livedalen	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to amendment filed December 22, 2005.

Claims 1-21 are pending.

Claim Objections

Claim 13 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 13 recites the same limitations disclosed in claim 9.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-13, 15-20, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Wijntjes et al. (2005/0002032), (priority from provisional 60/468286 Filed May 5, 2003).

In regard to claim 1, Wijntjes discloses (fig. 4, fig. 10A) a polaroid encoder system for detecting movement, the system having a movable polarizing code

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element (114); a detector module to detect an amplitude based on how much illumination passes through a first portion of the movable polarizing code element, the detector module having a first light detector (120A) covered with a first static polarizing filter (116A) that is oriented in a first direction; a second light detector (120B) covered with a second static polarizing filter (116B) that is oriented in a second direction (page 4, paragraphs 0067, 0068); a first determination module to identify a quadrant of the movable polarizing code element based on how much illumination passes through a second portion of the movable polarizing code element; and a second determination module coupled to receive the amplitude and the quadrant and to determine an angular position of the movable polarizing code element using the amplitude and the quadrant (page 7, paragraphs 0106-0109).

In regard to claim 9, Wijntjes discloses (fig. 4, fig. 10A) a method for determining angular position of a movable polarizing code element, the method including illuminating the movable polarizing code element; detecting a first amplitude based on how much illumination passes through a first portion of the movable polarizing code element and a first static polarizing filter (116A) oriented in a first direction; detecting a second amplitude based on how much illumination passes through a first portion of the movable polarizing code element and a second static polarizing filter (116B) oriented in a second direction (page 4, paragraphs 0067, 0068); determining a quadrant of the movable polarizing code element based on how much illumination passes through a second portion of the movable polarizing code element; and determining the angular position of the

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movable polarizing code element using the first amplitude, the second amplitude and the quadrant (page 7, paragraphs 0106-0109).

In regard to claim 17, Wijntjes discloses (fig. 4, fig. 10A) a method for determining angular position of a movable polarizing code element, the method including means for illuminating the movable polarizing code element (110); means for detecting a first amplitude based on how much illumination passes through a first portion of the movable polarizing code element and a first static polarizing filter (116A) oriented in a first direction (120A); means for detecting a second amplitude based on how much illumination passes through a first portion of the movable polarizing code element and a second static polarizing filter (116B) oriented in a second direction (120B) (page 4, paragraphs 0067, 0068); means for identifying a quadrant of the movable polarizing code element based on how much illumination passes through a second portion of the movable polarizing code element; and means for determining the angular position of the movable polarizing code element using the first amplitude, the second amplitude and the quadrant (page 7, paragraphs 0106-0109).

In regard to claims 2, 3, 5 10, 15, 18, and 22, Wijntjes discloses (fig. 16B) a controller module (810) coupled to receive angular position of the movable polarizing element and the controller module uses the angular position to control a device coupled with the movable-polarizing code element (page 6, paragraph 0095, page 7, paragraph 0111); and the first light detector and second light detector are photodiodes (page 3, paragraph 0046).

In regard to claims 6, 7, 8, and 16, Wijntjes further discloses (fig. 14) that the movable polarizing code element has a code (752, 754) located in a segment of the second portion of the movable polarizing code element; wherein the detector module to also detect how much illumination passes through the second portion of the movable polarizing code element (page 4, paragraph 0068, page 7, paragraph 0106-109).

In regard to claims 11-13, 19 and 20, Wijntjes discloses utilizing a code that is substantially opaque (page 7, paragraph 0106); and the filters are static.

In regard to claim 16, Wijntjes discloses detecting how much illumination passes through the second portion of the movable polarizing code element

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 14, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wijntjes et al. (2005/0002032) as applied to claims 1, 9 and 17.

In regard to claims 4, 14, and 21, Wijntjes discloses a polaroid encoder which uses two detectors each covered by a polarizing filter. Wijntjes also discloses a third detector with polarizing filter. The three filters are each 120

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degrees out of phase, which is the maximum amount three filters can be out of phase. Therefore, Wijntjes teaches placing filters out of phase with each other at the maximum amount, but fails to disclose the first two filters being 90 degrees out of phase. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the first two filters of a two filter system 90 degrees out of phase so that the two filters are the maximum amount out of phase, allowing the greatest possible precision.

Response to Arguments

Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

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calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Livedalen whose telephone number is (571) 272-2715. The examiner can normally be reached on 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

bjl



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